

IN THE CLAIMS:

We claim:

1. A digital thermometer comprising:

a housing having first and second portions, the first portion defining a cavity;

a waterproof seal disposed between the first and second portions of the housing;

temperature conversion logic disposed within the cavity of said housing, said temperature conversion logic being encapsulated by a material having low thermal conductivity;

an insulating member disposed in the cavity of said housing;

a probe connected to said housing; and

a temperature sensing element disposed in said probe.

2. The digital thermometer of claim 1 wherein the waterproof seal includes an ultrasonic weld.

3. The digital thermometer of claim 1 wherein the water proof seal includes a temperature resistant glue.

4. The digital thermometer of claim 1 wherein the waterproof seal includes a gasket and a screw interconnecting the first and second portions of the housing.

5. The digital thermometer of claim 1 wherein the temperature conversion logic is encapsulated by epoxy.

6. The digital thermometer of claim 1 wherein the insulating member comprises foam.

7. The digital thermometer of claim 1 wherein the insulating member comprises polystyrene.

8. A method of making a digital thermometer comprising:
 - encapsulating a microprocessor in a material having low thermal conductivity;
 - inserting the microprocessor in a cavity of a first portion of a thermometer housing;
 - applying a sufficient amount of insulation to the cavity to fill the cavity;
 - sealing a second portion of the thermometer housing to the first portion of the thermometer housing; and
 - connecting a probe to the thermometer housing.